

**PATENT ABSTRACTS OF JAPAN**

(11)Publication number : 01-219143

(43)Date of publication of application : 01.09.1989

(51)Int.Cl. C22C 38/00

C21D 6/00

C22C 38/16

H01F 1/08

(21)Application number : 63-044951

(71)Applicant : SUMITOMO SPECIAL METALS CO LTD

(22)Date of filing : 26.02.1988

(72)Inventor : NAGATA HIROSHI  
HIROZAWA SATORU**(54) SINTERED PERMANENT MAGNET MATERIAL AND ITS PRODUCTION****(57)Abstract:**

**PURPOSE:** To obtain a permanent magnet having superior magnetic properties by incorporating Cu to a rare-earth sintered permanent magnet containing Fe-B-rare earths as a basic series and also containing Co and subjecting the above magnet to sintering and then to heat treatment under specific conditions.

**CONSTITUTION:** Powdered raw materials are mixed so that they are formed into a composition consisting of, by atom., 12W17%, in total, of Nd and Pr, 5W14% B, <20% Co, 0.02W0.5% Cu, and the balance Fe, which is pulverized in an inert-gas atmosphere of Ar, etc. The above powdered raw materials are compacted in a magnetic field and the resulting green compact is sintered in a reducing or nonoxidizing atmosphere at 900W1,200° C, and the sintered compact is subjected to heat treatment in vacuum, in an inert-gas atmosphere, or in a reducing atmosphere at 430W600° C for about 5minW40hr. By this method, the sintered permanent magnet having high coercive force, and superior square characteristic in demagnetization curve can be obtained.

**LEGAL STATUS**

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]

Copyright (C); 1998,2003 Japan Patent Office